

Ag Radio programs for September 25 - October 1, 2017

Nitrates

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Nitrogen is a crucial element in plant growth. Under normal conditions nitrogen is taken up by the plant roots and quickly processed through pathways to proteins, amino acids, chlorophyll, and DNA among many other uses in the plant. But occasionally a plant will take up nitrogen and then it gets stuck due to some form of stress on the plant and you have free nitrates present in the plant. Once more normal growing conditions return to the plant's microclimate it goes ahead and processes the nitrogen into the usual forms. If a plant is eaten by livestock, particularly ruminants like cattle or sheep when there are high levels of free nitrates in the system, the animal can become ill or die. The nitrates get converted in the gut to nitrites, if excess nitrites build up they enter the blood stream and quickly impair the blood's ability to carry oxygen. The blood of the animal can appear like chocolate syrup. If caught in time it is easily treated by a vet and the animal can be saved. Drought is one of the principle ways that we end up with high nitrates in forages and most commonly in sorghums, but it can be in any green plant. Fortunately it appears that we had good enough growing conditions early this year that the later season dry weather hasn't had too much of an impact. We have sent several forage samples in for producers and of late, nearly all of them have come back at very low levels. But things can change in a hurry and testing to be safe is always a good idea. If you had any forage that looked drought stressed, bring a sample in and let's get it checked for nitrates! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

Prussic Acid

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Yesterday we talked about nitrates and how high nitrates can come from almost any plant. Prussic acid is a totally different risk that livestock can face and can come from small early growth or later on with drought stressed forages. If a plant is harvested with high nitrates, they don't go away unless the forage is ensiled which can reduce nitrate levels by up to half. Prussic acid is hydrocyanic acid or hydrogen cyanide. Yeah, it's not a good thing. Prussic acid is very common in sorghum plants and that includes anything that is in that family - grain or forage sorghum, sudangrass, sudex crosses - they can be a prussic acid risk. Corn is not a prussic acid risk. Some oddball plants can also be a prussic acid risk at certain times. Hydrogen cyanide poisoning happens quickly. Nitrate poisoning keeps the blood from taking up oxygen, prussic acid keeps it from releasing oxygen. The blood from a poisoned animal is incredibly bright red. Animals can be saved, but there is a much shorter window to act and cattle frequently aren't saved. Anything that damages the leaf or ruptures the cells causes prussic acid to quickly build up, but it also goes away soon. Harvesting forages and allowing a couple of weeks to pass usually drops prussic acid levels to non-threatening levels. A day or two after a hard freeze, sorghums, especially grain sorghum, can be very toxic. But 72 to 96 hours later the prussic acid risk is gone. If new shoots develop after a freeze they can be high also. If you have questions, call me. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

Last Alfalfa Harvest

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Frequently, by the time we get to late September I'm getting quizzed by alfalfa growers as to how late they can take that last cutting off of their alfalfa fields. This year, because of the dry weather in August and September, I haven't seen a lot of regrowth on alfalfa fields so nobody is really asking me yet. But a few good rains even into October could get a good new growth going on alfalfa which could cause some real consternation as we get closer and closer to the end of the season. Okay, we want our alfalfa to go into dormancy with a full tank of carbohydrates in the roots and crown. During October that is going to take about 3 weeks of good growing conditions following a cutting. Average first frost is October 19th. However, a light frost won't put alfalfa dormant, it needs to get down into the lower 20s for a couple of hours to really do that. We'd expect those kind of temperatures in early to mid November. But we've had them earlier. One year of a late cut and insufficient regrowth will not kill your alfalfa. It will hurt the yield the following year and makes it more necessary to give it 30 or 40 pounds of phosphorus which you should be doing annually anyway. At this point in time I'd honestly encourage you to just let it go. You can always throw an electric fence around the field in November and start grazing it. Which helps on alfalfa weevil control as well. If you get good growth, and they are talking a big cold snap with temperatures down into the teens, then you can sneak out and cut just ahead of that. You get the cutting off, things go dormant and the alfalfa never starts regrowing so no problems. But for now, I think we just need to take a wait and see approach. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

Lady Beetles

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. I haven't heard from anyone calling me to complain about ladybugs swarming into their house. But it is still early yet! This is the time that we usually see this phenomenon and the culprit is one particular species of lady beetle, the multicolored Asian Lady beetle. While they can be several different shades, including greenish and orangish, they always have white cheeks when you get head to head with them. This particular species obviously is not native to North America, not with a name like that. They were intentionally brought here by the USDA to deal with aphid outbreaks in the 1970s in the midwest and east, although there was apparently an accidental introduction from insects on a freighter that docked in New Orleans. Regardless we've got them now. They are extremely efficient at eating aphids. There is no doubt about that. Like most insects that feed on other insects, when there is an abundant food source there are a lot of things to eat that food source. Last year we had a very bad ladybug invasion season. Last year we had a lot of sugarcane aphids throughout Kansas and here locally. Coincidence? No, they were correlated. For any number of reasons we have had very few sugarcane aphids in Kansas this year. As in I may have seen 2 sugarcane aphids at the most. Without an abundant food source I think we'll have fewer problems this year. There'll still be some, but not like last year, or at least I hope. You can still use the synthetic pyrethroids to spray around windows, foundations, etc. of your home to reduce these and other invading pests. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

What planting rates

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. I'm as guilty as everyone else in still talking about wheat planting rates in pounds per acre rather than population. We've finally gotten milo and bean producers to the point they are talking populations so why aren't we talking that with wheat growers. We can easily find 4 to 6000 seed differences in seeds per pound in different varieties of wheat and especially in how well that wheat has been cleaned to get rid of lightweight seed. Yes, lightweight seed wheat does negatively impact stand establishment and ultimately final population. Running seed wheat through an air screen or a top gravity table can really raise the test weight which means you've got fewer, but larger, seeds per pound. In K-State tests, uncleaned bin run seed averaged 10.5 plants per foot of row while seed passed over a gravity table average 12 plants per foot of row, and that was a significant difference. Uncleaned seed may be running 16 to 17,000 seeds per pound while seed ran over a gravity table can be down to 12,500 seeds per pound. To plant 1.2 million seeds per acre this is a difference between 70 pounds per acre and 100 pounds per acre. For our area we should be looking at 1.1 to 1.3 million seeds per acre. And that's for planting in that optimal window. We get past November 1st and those rates need to go up significantly to compensate for lower tillering. Later planted wheat has smaller heads with fewer kernels. Which means you need to plant more seeds to get more heads to compensate. Every bag of certified seed that you buy, or if you send some in for germination testing, will give you number of seeds per pound so you can adjust your planting rate to hit those targets. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.